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Capacity in motion: comparative COVID-19 governance in India and South Africa

Tathagata Chatterji [a], Graeme Götz [b], Philip Harrison [c], Rob Moore[b] and Souvanic Roy [d]

ABSTRACT

With the COVID-19 pandemic, critical questions have surfaced in several countries regarding the capacity of the state to respond with agility to the crisis, and to use the crisis in a transformational way over the longer term. These questions are addressed in a comparative study of the State of Kerala in India and the Province of Gauteng in South Africa. The study contributes to two partial gaps in the literature: (1) inadequate attention to the subnational dimensions of crisis governance; and (2) the temporal dimension of state capacity, noting historical and contextual factors conditioning capacity, with shifts through the course of a crisis and beyond. While both territories showed significant agility in response to the crisis, Kerala strengthened its capacities in a way that Gauteng did not, and this had significant implications for the abilities of these governments to both manage the pandemic and leverage the pandemic for longer term benefit.

KEYWORDS

state capacity; subnational; comparative study; adaptive governance; pandemic governance; COVID-19

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1. INTRODUCTION

The COVID-19 pandemic has provided a compelling window into governance arrangements and processes across all geographical scales. It has provided perspective on issues ranging, for example, from public leadership to the use of digital technologies in governance. Connecting many of these themes are concerns with state capacity. Intuitively, stronger capacity leads to stronger outcomes, and studies do confirm that governments with higher capacities were better able to contain the spread of the pandemic and reduce mortality rates (Ali et al., 2021; Baniamin et al., 2020; Cabana et al., 2021; Chen, 2020). However, state capacity is not a straightforward concept.

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One dimension that has received little attention thus far is how different forms of state capacity are constituted and shift *over time*. A crisis such as a pandemic accelerates changes in capacity, in positive and negative directions. Over the course of a crisis a state may respond effectively at one point, and not so at another. In the heat of a crisis, the concern is whether a state has the capacity to respond with agility; but with a longer perspective in view, the question is whether the state can embed newly mobilized response capabilities in a lasting transformational way. Understanding this temporal dimension of evolving capacity with reference to the contextual specificities of different territories is the main concern and contribution of this paper.

We explore the temporal nature of evolving state capacity through a comparative analysis of two country contexts, focusing on responses at the subnational level of government. The COVID-19 period (2020–22) has thrown a fresh spotlight on variability in state capacity across different contexts. Indeed, the pandemic provides a unique opportunity to compare capacities. States everywhere have grappled with identical risks and uncertainties and followed broadly similar public health protocols. Yet emerging comparisons (e.g., Greer et al., 2020) suggest that the ability to mobilize administrative machinery, and manage state–societal relations, has varied widely, and this needs deeper explanation.

However, to date, the dominant focus has been on national-level capacities (Ali et al., 2021; Baniamin et al., 2020). In this study, we adjust the lens to compare at the subnational level. This is for two reasons. First, in most federal political systems (and in some unitary and hybrid systems) the operational responsibility for disaster management and healthcare rests with devolved provincial/state or municipal-level governments. Second, our contention is that evolving capacity is highly specific to territorially defined contexts, where historically sedimented institutional norms, and informal codes and routines, frame path dependencies and possibilities for rupture (Bansal et al., 2018). Focusing on the subnational level allows us to explain the variation in crisis response capacity in a more nuanced manner.

In this article, we compare how government capacities in the COVID-19 context were conditioned by context, and evolved contextually during the crisis, in Kerala State in India and the Gauteng Province in South Africa. Kerala and Gauteng are roughly equivalent regions. Kerala has a population of a little more than twice that of Gauteng (35 million compared with 16 million) but an economy that is remarkably similar in scale (a gross domestic product (GDP) of approximately US$106 billion for Kerala and US$110 billion for Gauteng) (Business Standard & News, World Bank, 2022). Both India and South Africa are important emerging economies and have broadly similar types of political arrangements, based on multi-party democracy and constitutionally mandated separation of powers between different tiers or spheres of government. Subnational territories in both countries were operationally empowered to deal with public health. In this comparison we in part take our cue from Patrick Heller who for the past two decades has compared the democratic decentralization measures of post-apartheid South Africa with India (and with Kerala in particular) (Heller, 2001; Heller et al., 2007). He argues that in both India and South Africa, 'representative democracy has gained tremendous traction and a critical baseline of inclusion in what are highly diverse and unequal societies' (Heller, 2019, p. 175).

While the two contexts are very similar in some dimensions, they are also very different in others. As Heller's analysis reveals, they differ significantly in terms of pre-COVID-19 political histories and practices, administrative strength and integrity, and in particular the degree of embeddedness of the state in society. Here we rely crucially on the idea of 'embedded autonomy' in Evans (1995) which emphasizes both the institutional and relational dimensions of capacity. The need for an effective bureaucracy is self-evident, but state strength also requires working closely with other actors to advance developmental agendas. As Bell and Hindmoor (2009) explain, capable states are characterized by: the structures of decision-making which lend policy coherence; a strong administrative apparatus to implement policy goals; adequate fiscal resources;

application of appropriate policy instruments to shape societal behaviour towards desired outcomes; but above all, the social legitimacy which allows the state to influence social behaviour.

As we will show, the relative 'embedded autonomy' (Evans, 1995) of Kerala and Gauteng meant that each brought different forms of capacity to bear in response to the crisis. Recognizing this difference provides the basis for a constructive comparison that allows us to draw theoretical inferences (for further exploration) between accumulated and contextual underpinnings, and state performance, over time, under conditions of crisis. We show that while both territories demonstrated significant initial agility in response to the crisis, Kerala progressively strengthened its capacities in a way that Gauteng did not. This had significant implications for the abilities of the respective governments to both manage the impacts of the pandemic and leverage the lessons of crisis-response for longer term benefit. The question is why did the capacity evolve differently? Our answer is that prior capacity matters, but not in the linear way it has thus far been read in the COVID-19 literature as pre-existing strength equating to good outcomes. Rather we need to understand how pre-existing capacity, forged by the specificities of territorial context, interacts dynamically and contingently with newly assembled crisis-response capacity *over time* to create different prospects for consolidation. In this we speak back to theories of historical and sociological institutionalism, and infrastructural power in state–society relations (Mann, 1984).

The research is qualitative and supplements a large body of published resources through interviews with key stakeholders, senior policymakers, bureaucrats and academics. In the case of Gauteng, we drew on work done by the authors in support of government from March 2020 to early 2022, including an in-depth case study of leadership and governance in the Gauteng provincial response based on 15 virtual interviews conducted between August and November 2020 (Moore & Götz, 2021), and a country report to record and assess the South African response (RSA, 2021). For the Kerala section, 18 in-depth interviews were conducted online with key respondents between July and September 2021.

The remainder of the paper is structured as follows. In the next section, we discuss the relevant literature on state capacity, structured around the temporal dimensions of state capacity. Having established this conceptual framing, we then sequentially discuss the responses in Kerala and Gauteng. In each section we ask the following research questions:

- How have socio-political contexts and pre-existing governance capacities shaped the ability to deal with the pandemic crisis?
- How were existing administrative and relational capacities mobilized, or new capacities developed in immediate response to the crisis?
- How did healthcare administration and other capacities shift as responses evolved beyond the initial need for action?
- What were the impacts of the crisis on the long-term configuration of these governance capacities?

In this way we emphasize the temporal dimension of state capacity; that is, the way in which capacities were constituted historically, then evolved through a crisis, and may (or may not) have given rise to enhanced crisis-governance capability over the longer term. We end by synthesizing some key comparative insights emerging from the analysis.

2. INTRODUCING THE STATE CAPACITIES LITERATURE: EMBEDDED AUTONOMY AND A TEMPORAL FRAMING

There is a rich literature on the capacities required by the state to defend its citizens, mobilize resources and coordinate collective action. The literature emphasizes the importance of bureaucratic–administrative abilities but significant contributions also explore the role of 'political

coherence' in building capacity (Hendrix, 2010), and the state's 'ideational capacity' which refers to its ability to shape public discourse (Cummings & Nørgaard, 2004). Migdal (1988, p. 4) understood that state capacity is relational, resting in the ability of the state to 'penetrate society, regulate social relationships, extract resources, and appropriate or use resources in determined ways'. Mann (1984) referred to this as 'infrastructural power', a form of persuasive, rather than despotic, power.

The conceptual challenge is how to simultaneously represent the bureaucratic ('Weberian') and relational underpinnings of state capacity. Here, Evans' notion of 'embedded autonomy' remains helpful (Evans, 1995). The idea of 'autonomy' refers to the ability of a professionalized bureaucracy to wield influence apart from immediate political interests. 'Embeddedness' refers to broad-based and institutionalized relationships between the state and society that transcend narrow, often predatory, interests and personalized ties.

Research related to the COVID-19 pandemic is adding a wealth of new insight. The COVID-related literature broadly confirms the significance of state capacity to response outcomes. Although still dominated by national-level perspectives and comparison, there is some attention to subnational institutions (e.g., Organisation for Economic Co-operation and Development (OECD), 2020), and the multi-scalar nature of the pandemic response. This requires attention to capacity at all levels, from the neighbourhood to the nation-state, and to the quality of the relationships across the levels (Cabana et al., 2021; Casula & Pazos-Vidal, 2021).

The idea of embedded autonomy is used in some of the literature. Chen (2020), for example, argued that Taiwan's (initial) success in responding to the pandemic could be explained in terms of a legacy of embedded autonomy, while Christensen and Lægreid (2020) explain Norway's relative success as a virtuous combination of capable government, societal embeddedness and fortuitous circumstances. Christensen and Lægreid (2020, p. 774) referred to 'competent politicians, a high-trust society with a reliable and professional bureaucracy, a strong state, a good economic situation, a big welfare state, and low population density'. Ali et al. (2021) explain the failure of Bangladesh to manage the crisis in terms of a weak state which lacked the infrastructural power to get citizens in a 'strong society' to comply with necessary but unpopular policies. They argue that an effective response to a crisis 'requires an extraordinary and unprecedented degree of cooperation and trust between citizens and the state' (p. 9).

In our study of Kerala and Gauteng, we follow on from these contributions, emphasizing both the internal competence of the state machinery and the quality of the ties between state and society. However, we also emphasize the temporal dimension of capacity, first accumulated historically before the crisis, and then showing that crisis itself induces change in the levels and forms of capacity.

This attention to the historicity of capacity draws broadly on a historical institutionalism which shows how the social norms, behaviours and patterns that underpin organizational arrangements and capacities are embedded in evolutionary pathways from which they can never be abstracted (Bansal et al., 2018).

We continue the literature review below, and structure the case studies to emphasize 'capacity in motion'. Evans (1995) recognized that embedded autonomy draws deeply on cultures, relationships, structures and practices that have co-evolved over long periods of time, and so we begin by emphasizing the contexts within which prior capacities were formed. We go on to explore the literature that provides an insight into the mobilization of capacities once crisis strikes, the evolution of capacity during crisis and the implications of crisis for long-term changes beyond the crisis.

2.1. Context and prior capacity

Capacity is not a free-floating attribute that can be manufactured at will but is, instead, deeply embedded within historically produced context (Atkinson, 2021; Cummings & Nørgaard,

2004). These contextual factors include constitutional arrangements, the nature of political settlement, political culture, the correlation of political forces, the interface between state and society, and more banal matters such as national income and technical skills.

Given the multifaceted nature of context, studies rarely engage with more than one or two aspects (e.g., Grassi & Memoli, 2016; Mejía-Dugand et al., 2020). There is, for example, an instructive debate on how the mode of governance – democratic or authoritarian – impacts on the capacity to handle crises (Gizelis, 2009; Greer et al., 2020; Mao, 2021). The conclusion is ambiguous in relation to overall capacity but clearly indicates the impact on the mix of capacities. Gizelis (2009, p. 1) concludes that 'while strong autocracies can implement efficient policies with fewer constraints, democracies tend to be more responsive to the needs of the population'.

The nature of a crisis determines which pre-existing, contextually derived, capacities are significant. For a pandemic, pre-existing capacities in the health system are self-evidently important. In the case of Ebola virus disease in West Africa, the sudden onset of the crisis confronted a 'depleted state' where the key capacities in the health sector were missing (Lodge, 2013). However, even for a pandemic, there are forms of capacity beyond the technical dimensions of the health system which are necessary, including political leadership with moral authority, skilled operational leadership, institutionalized disaster preparedness, effective communication systems, strong decision support systems (e.g., information systems), supportive institutional cultures and robust relational networks (Greer et al., 2020; Heo & Seo, 2021). To effectively navigate a crisis, whether health-related or otherwise, the state must have the capacities to anticipate and make sense of crisis, learn through the crisis, mobilize support, manage contradictions, shape the social discourse, adapt as required and sustain legitimacy (Ali et al., 2021; Folke et al., 2005).

2.2. Assembling and mobilizing capacity

As a crisis strikes, the state must rapidly mobilize available capacities. To bring together these capacities may require the activation of special institutional arrangements, and the rapid assemblage of partnerships drawing on prior relationships. Some tasks are technical such as activating emergency procurement procedures, but others may require high-level leadership and communication skills to mobilize the energy and commitment of officials and social partners.

Williams et al. (2000, p. 295) describe the ability to integrate individual capacities across government, civil society and business, as the overarching 'institutional capacity' of government. The underpinnings of this institutional capacity include both the degrees of coherence – or the quality of intergovernmental relations – across government and the depth of state embeddedness in society (Mejía-Dugand et al., 2020).

The speed and urgency with which capacity is assembled is shaped by factors including 'the ideological orientations of the governing elite, with right wing populist governments, for example, resisting coherent mobilization for a systematic response to the COVID-19 pandemic and 'prone towards short-termed quick fixes' (Bayerlein et al., 2021, p. 422). The ways in which capacity is mobilized includes varying degrees of top-down direction and bottom-up mobilization, with the mix shaped by different political cultures and systems (Cabana et al., 2021).

2.3. Shifting capacities during crisis

Capacity is not a fixed attribute. The demand of a crisis may work to strengthen state capacity with Besley and Persson (2009) showing, for example, how wars have historically served to build state capacity, and Budd et al. (2020) arguing that the outbreak of COVID-19 has significantly contributed to expanding capacities to deploy digital technologies. However, a crisis also presents great danger to the state, with the possibility of declining or disintegrating capacity. The pressures of a crisis may produce disunity in the power bloc, declining coherence in the bureaucracy and a loss of political legitimacy (Jessop, 2015).

While capacities shift, a crisis itself is never static. Mao (2021) shows how the different bundles of capacity in China and Korea played out across the pandemic. At different times of the pandemic different forms of capacity were effective, and so understanding the interaction between changing capacity and the changing nature of the crisis is a critical ingredient of analysis.

2.4. Capacities beyond crisis

As a crisis recedes, the question invariably turns to long-term impacts on capacity. Janssen and Van der Voort (2020, para. 1) make a helpful distinction between agility and adaptability: 'Whereas agility relates mainly to the speed of response within given structures, adaptivity implies system-level changes throughout government.' They point to many examples of agility during a crisis but leave open the question of whether the crisis has produced real adaptation.

Some writers have used an even more ambitious term, suggesting that a crisis may be transformational. Eshuis and Gerrits (2021, p. 280) argue that there is a transformational effect if the crisis 'changes the institutional and material realm deeply, widely, and enduringly'. One form of transformation is the normalization of turbulence, as the state develops the capacity to handle whatever form a crisis may take in the future (Ansell & Trondal, 2018). Whether a crisis leads to transformation, or even adaptation, is an open question, with Willi et al. (2020), for example, concluding that transformation is possible only if there is a deep commitment to reflexive learning.

3. KERALA CASE STUDY

Kerala is widely acknowledged as India's leading state in healthcare provision with a long track record in effective disaster management through decentralized governance mechanisms (Chathukulam & Tharamangalam, 2021; Heller, 2019). This legacy to a large extent shaped the state's COVID-19 pandemic response. During the first stage (January–May 2020) of the COVID-19 crisis the state managed to contain the virus outbreak, demonstrating agile leadership, and adopting a humane approach to the vulnerabilities of the urban poor. However, during the second wave (March–November 2021), the daily caseloads surged, and the state's reputation in disaster governance was questioned.

3.1. Context and prior capacity: strong state–society relations and solid disaster management capabilities

The roots of Kerala's healthcare and disaster governance capacities are framed within the state's unique developmental paradigm, which is acknowledged globally as the 'Kerala model' for prioritizing human development over economic goals (Desai, 2005; Parayil, 1996). The state's attainments against indicators such as the infant mortality rate, gender participation and female literacy are much higher than the national average and are often compared with those of developed countries (Menon et al., 2020). Kerala is a small, densely populated, prosperous state, with a relatively well-balanced regional development pattern, the rural areas of the state having access to good-quality primary education and healthcare facilities and good connections to higher level specialized services in district towns.

There is a large corpus of literature on Kerala's social-democratic political culture that had evolved through peoples' movements, grassroot-level mobilization and multicultural accommodation over a century or more (e.g., Chathukulam & Tharamangalam, 2021; Desai, 2005). Although the control of the state government oscillates between coalitions led by the Left Democratic Front and a more centrist United Democratic Front, there is broad political consensus around the development model centring around progressive social policies through state funding. However, Kerala has lagged in employment generation, and the state's welfare-driven policies are heavily dependent on remittance flows. In 2019, about 4 million people, or one in every six, in the

state worked abroad and sent home an estimated US$14–15 billion, accounting for about one-third of the state's income (Ghosh, 2020a, 2020b).

Compared with the other Indian states, local governments in Kerala are politically empowered with mayors given executive power (Chathukulam & Tharamangalam, 2021; Prakash, 2020). The People's Plan movement, launched in 1996, actively sought to encourage bottom-up participatory planning at the community level and, as part of the social mobilization strategy, poor women were organized through neighbourhood-based self-help groups (W-SHG) under a poverty eradication programme called Kudumbashree. Moreover, under the Kerala Town and Country Planning Act (2016), the state has prioritized building disaster management capacities through an integrated multilevel planning framework. These measures strengthened local institutions and deepened the grassroot connection in handling disasters such as, for example, H1N1, Nipah and the severe floods in 2018 and 2019 (Menon et al., 2020). These experiences proved useful during the COVID-19 crisis.

3.2. Assembling and mobilizing capacity: rapid multi-tiered disaster response

The Kerala government demonstrated exemplary mobilization of capacity, particularly during the early months of the crisis (January–May 2020). Learning lessons from the recent disasters of 2018 and 2019, Kerala took precautionary measures before being struck by the coronavirus. The government opened a control room on 24 January 2020, started airport surveillance and began pooling emergency medical supplies (Rahim et al., 2020; Rajan, 2020). The Directorate of Health Services (DHS) under the state's Ministry of Health and Family Welfare (MoHFW) started operationalizing the World Health Organization's (WHO) 'test–trace–isolate and support' protocols by sensitizing medical professionals, initiating public awareness campaigns and opening a 24/7 helpline (Rahim et al., 2020). Incidentally, Kerala became the first Indian state to experience COVID-19 when two medical students returning from Wuhan in China tested positive on 30 January 2020 (ICMR, 2022). But, by that time, the State was well prepared.

Soon, the state government declared the outbreak a state disaster and put in place an elaborate multitier administrative mechanism to address it. A 24-member State Response Team (SRT) was constituted with the health minister as its chairperson. This was supported by a planned and hierarchic structure of disaster governance with 18 state-level teams (to manage activities of surveillance, call centres, human-resource management, and training and infrastructure). There were also district level rapid response teams (RRTs) under the charge of a minister. At the local level, elected ward councillors were tasked with building community awareness about COVID-19 protocols with the help of accredited social health activists (ASHA) and W-SHGs under Kudumbashree. At the top, a committee, directly led by the state chief minister (CM), provided overall policy guidance, and facilitated interdepartmental coordination. Indeed, the CM's direct involvement helped significantly, as a senior official of the health ministry mentioned:

> Crisis requires coordinated response. You need various departments like police, revenue, civil supply and water supply to work in tandem. Normally when the Disaster Act comes into play, the revenue department takes lead. This time the health department is leading, all other departments are working together. [The] CM's hands-on approach … daily monitoring has really made a big difference. (K-02 interview, 29 July2021)

As the pandemic spread, robust pre-existing public healthcare institutions enabled Kerala to swiftly undertake emergency responses. By March 2020, all government hospitals in the state were turned into dedicated COVID-19 hospitals equipped with the requisite infrastructure (Rahim et al., 2020; Rajan, 2020). Kerala also embarked on an aggressive contact tracing exercise, called 'Break the Chain', to prevent community outbreaks. This was done through extensive

application of digital technology tools and deploying neighbourhood health workers on the ground.

The ability of Kerala's local governments to mobilize community workers in large numbers proved particularly important in dealing with the non-clinical and humanitarian dimensions of the COVID-19 crisis. As frontline workers on the ground, ASHA (26,000) and Kudumbashree (220,000) volunteers became force multipliers for the local administration (*Times of India*, 2020).

The ASHA and Kudumbashree workers performed a range of tasks such as the arrangement of ambulances and hospitals for the seriously ill, contact tracing, monitoring people in quarantine, and delivery of food and medicines to those in need. Their roles became particularly significant when the national government abruptly declared a nationwide lockdown on 25 March 2020. Poor migrant workers from various other Indian states (estimated between 3.5 million and 4 million) in Kerala lost their incomes and faced acute livelihood vulnerabilities. Local governments immediately launched emergency relief measures on a massive scale by mobilizing community workers. For two weeks, community kitchens set up by Kudumbashree volunteers in 135 urban and 941 rural local bodies served food to 250,000–280,000 persons every day (*The Hindu*, 2020). As a former district medical officer mentioned, 'ASHA and Kudumbashree women volunteers were the foot soldiers on the ground in the COVID-19 battle. They went house to house – door to door – they knew the locality – they knew people – they were force multipliers for local governments' (K-08 interview, 18, September 2021).

A combination of factors, including agile leadership, prior experience in handling disasters and empowered local governments with deep community ties, enabled Kerala to scale up its mobilization capacity, especially during the first phase of the pandemic.

3.3. Shifting capacity during crisis: infrastructures strained but proved resilient

While Kerala was able to manage the COVID-19 crisis well during the initial months, the daily caseloads started spiking after the lockdown regulations were gradually relaxed from 3 May 2000 onwards. The situation was alarming during the second wave which raged between March and November 2021. Between 23 August and 19 September 2021, Kerala accounted for more than half of India's daily cases (MoHFW, 2021; Varshney, 2021). By November 2021, over 14% of the state's population had contracted the virus, which was the highest percentage in the country, although the case fatality rate of 0.67 had consistently remained well below the national average of 1.34 (WHO, 2021).

The apparent paradox of Kerala's rising daily caseloads despite having an agile government and a robust vaccination record was attributed to demographic and epidemiological factors. After the lockdown regulations eased, the national government launched a massive evacuation operation to bring back Indians stranded abroad. In the process, over 1.2 million Keralites working in the Gulf Region returned home (Business Standard & NewsWorld Bank, 2021). To expedite the evacuation, COVID-19 testing requirements were not rigorously applied (Chathukulam & Tharamangalam, 2021). Interstate migrant workers, who had gone back to their home states when the nationwide lockdown was imposed (25 March 2020), also began returning to Kerala. The rapid circulation of people over a short span of time allowed infection numbers to surge. But as a senior leader of the ruling LDF coalition explained, 'We knew that numbers would go up. They [Gulf returnees] are our own people – our own family members. But what else could we have done? The situation was simply beyond control' (K-14 interview, 18 September 2021).

Population flows apart, medical experts regarded lower immunity levels in the population as another key factor. According to Gagandeep Kang, a member of the national COVID-19 Working Group, Kerala's seropositivity level of 43% was much lower than the national average of 68% (*The Wire*, 2021). Menon et al. (2020) argued that as the prevalence of cardiovascular disease is higher in Kerala compared with other Indian states, populations in the state are likely to be more susceptible to COVID-19. Moreover, after the initial success in flattening the virus infection

curve, the government became somewhat complacent and allowed mass gatherings for socio-cultural events which turned into super spreaders. Kerala's high population density further worsened the situation. Worldwide, densely populated regions faced difficulties in isolating COVID-infected patients and implementation of social distancing norms as required under COVID-19 management protocols (Ghosh et al., 2020).

Understandably, increased COVID-19 caseloads severely stressed Kerala's medical infrastructure. The situation worsened particularly during the second wave which raged from March to June 2021. Taking advantage of the situation, several private hospitals started fleecing COVID-19 patients by charging exorbitant rates. This ultimately forced the judiciary to step in, with the Kerala High Court ordering the state government to fix uniform treatment rates in private hospitals (*Economic Times*, 2021). While the state government's COVID-19 management had initially relied primarily on public hospitals, the judicial intervention led to a change in approach (*The New Indian Express*, 2021). The government began to engage with the private clinics more actively in ramping up testing and treatment capacity, and regulating service charges.

3.4. Capacities beyond the crisis? The application of digital technology

The COVID-19 pandemic was a catalyst in further strengthening Kerala's administrative capacity and the state's embeddedness in society. In both respects the application of digital technology played a crucial, albeit sometimes contested, role.

The pandemic saw unprecedented and innovative applications of digital technology in various spheres, including public communication, surveillance, clinical management and non-clinical support, which in turn combined to make Kerala's disaster governance capabilities significantly more dynamic, agile and techno-savvy. Kerala is one of India's most digitally advanced states with 75% digital literacy, 51% of households with internet connectivity and 95% mobile phone penetration (Ummer et al., 2021). As the coronavirus began to spread, the state government immediately initiated a massive public awareness campaign involving print, television and social media channels, and by partnering with civil society groups. The emphasis was on getting the message across quickly about COVID-19 norms and protocols. For example, the social network handles of Kerala police generated fun-packed informative posts to educate the local populace on the intensity of the pandemic, procedures for social distancing and the need to stay at home. As a civil society volunteer recalled, 'One YouTube videoclip featuring police officers dancing to demonstrate hand washing techniques went viral in social media – it was peppy and funny – it was a big hit' (K-05 interview, 29 July 2021).

As the COVID-19 outbreak became more widespread, the Kerala government launched a dashboard called COVID-19 Jagratha and a mobile app called GoK-Direct for real-time information-sharing. Moreover, the army of Kudumbashree volunteers were deployed to set up 300,000 WhatsApp groups for area-wide information dissemination and delivery of essential services such as medicine and food (Ummer et al., 2021).

Yet, despite all the public awareness building efforts, Kerala encountered initial challenges when the vaccination programme was launched. Vaccine hesitancy was particularly high among the elderly population. Moreover, a few self-appointed naturopaths began to spread anti-vaccine rumours through social media. To counter the challenge, the Kerala government launched targeted neighbourhood-specific public awareness campaigns by deploying women community volunteers on the ground and by setting up local WhatsApp groups. Such localized measures along with extensive campaigns through various media channels by the state (and the national) government were effective in reducing vaccine hesitancies. By November 2021, the state had vaccinated 95% of the current target population (18+ age group), or some 72% of the total population (MoHFW, 2021).

Digital technologies were also extensively applied for surveillance purposes. Kerala police's quarantine monitoring involved the extensive use of drones, geofencing and security camera

footage. Routes travelled by people who were found COVID-positive were mapped by tracking their mobile phone locations. However, the move became controversial on account of privacy violation and was soon stopped (Ummer et al., 2021). The experience provides an important lesson for attempts to scale up these infrastructural capabilities in future, showing that as much as they might boost administrative capacity, they risk compromising embeddedness unless accompanied by robust institutional mechanisms to ensure citizen privacy.

However, despite this concern with data privacy, in overall terms, public concerns were handled with agility, and in a sensitive manner, gaining public trust. Overall, the COVID-19 crisis strengthened state–society relationships and the trust the government had earned from the people. Effective handling of the crisis reaped benefits such as almost universal public buy-in to vaccination programmes, and paid a rich political dividend. The ruling leftist coalition not only returned to power for an unprecedented second consecutive term in the election held in April 2021, but also improved its seat tally. This was seen as a reinvestment of faith in its social policies, and trust in government more broadly.

4. GAUTENG CASE STUDY

This analysis of evolving crisis-response capacity in the Gauteng City-Region spans the period in which South Africa saw three major COVID-19 waves (Alpha wave, May–July 2020; Beta, December 2020–February 2021; and Delta, May–September 2021), and was entering a fourth (Omicron, November 2021–January 2022). This timespan was bookended by two widely applauded displays of government capability. In March 2020 the president announced a science-led countrywide lockdown that significantly flattened the pandemic's curve from late March to early May 2020, the first months of the pandemic (Dodds et al., 2020). And in November 2021, South Africa won praise for its quick identification of, and transparency around, the Omicron variant (Coy, 2021). However, while the governance of the crisis was characterized initially, and episodically, by agile mobilization of promising institutional innovations, these advances were ultimately compromised by a legacy of weakness in both dimensions of Evans' (1995) embedded autonomy. Gauteng entered the crisis with eroded capacity conditioned by its historical and more recent context. Long-unresolved pathologies in governance structures – notably webs of corruption and a bureaucracy immobilized by a sense of failure – and in turn a growing public-trust deficit, ultimately weakened the adaptive intent.

4.1. Context and prior capacities: eroded administrative autonomy and weak embeddedness

Gauteng, South Africa's economic heartland, presents a complex governance terrain. Within South Africa's system of 'cooperative governance', the principle of separate, but interdependent, spheres of government is constitutionally enshrined. The three spheres (national, provincial and municipal) each execute constitutionally allocated powers. Some powers are distinctive, but others, including disaster management and health, overlap the spheres. While in theory the constitutional principle of cooperative governance mitigates conflict around such overlapping competencies, in practice Gauteng entered the crisis with a history of weak intergovernmental relations – its provincial and local spheres more inclined to compete than collaborate even where interests align.

Gauteng reveals the deep contradictions of South African society, especially the sharp inequalities in living conditions and wealth distribution arising from its history. Government capacity has been partly conditioned by post-apartheid efforts to address legacies of inequity. While important progress has been made, initiatives to correct for racial inequality have had some unforeseen downsides. It has unsettled government bureaucracies in unexpected ways. In an analysis more widely applicable to many post-apartheid state institutions, von Holdt (2010)

traces poor functioning of hospital administrations in Gauteng to 'informal rationales shaped by the imperative to undo racism and white domination in the state and in the society more broadly that work against and erode the Weberian rationales for a meritocratic and effective state bureaucracy' (p. 4). These rationales introduce features such as an ambivalence to authority and to modern, professional skill sets, an obsession with saving face, and the replacement of effective organizational goals with budgetary rituals (von Holdt, 2010).

Furthermore, the ruling African National Congress (ANC) has used public sector employment to grow a new black middle class. While this has succeeded somewhat in addressing historical imbalances, the process has created webs of reciprocal dependence between the party and government employees, compromising bureaucratic professionalism, and supporting cronyism and a rent-seeking machinery within government. Ironically, corrective efforts have exacerbated frailties. Space for administrative manoeuvre is cramped by a plethora of procurement regulations enforced by armies of supply-chain management bureaucrats. Initiative from ordinary officials is stunted by fear of sanction from the auditor general or special investigative unit. In turn there has been an exodus of skilled and motivated public servants.

The Gauteng Department of Health went into the COVID-19 crisis both 'hollowed out', and bearing these unintended effects of critical scrutiny. Its weaknesses had become evident in 2016 with the so-called Life Esidimeni tragedy, where 144 mentally ill patients died following decisions to remove them to cheaper, less well-equipped, health facilities. The deaths occasioned a public outcry, and a string of official inquiries with damning findings on the GDoH's negligence, chaotic administration and violation of human rights (Durojaye & Agaba, 2018). While justified, these investigations have not led to improvements and have instead battered the confidence of health officials, instilling a deep sense of failure and a fear of scrutiny.

This deficit of autonomy is compounded by, and in turn exacerbates, a lack of embeddedness. Since the 2000s, Heller's systematic comparison of democratic deepening in South Africa and Kerala has led him to conclude that the latter's competitive politics has seen parties break from 'vanguardist traditions, become critical of bureaucratic state-led development, and … [commit] themselves to building democracy from the bottom-up'. By contrast, despite South Africa's admirable history of social mobilization in the anti-apartheid struggle, 'an electorally hegemonic party, that for historical reasons has developed an instrumentalist understanding of state power, has succumbed to insulationist and oligarchical tendencies'. In turn, social movement participation in governance has 'atrophied' (Evans & Heller, 2015; Heller, 2001, p. 134).

4.2. Mobilization of capacity: leadership agility and innovative structures

Though Gauteng entered the crisis with pre-existing capability severely compromised, both in terms of a stable and confident administration and healthy state–society relations, it moved with speed to establish new structures and ways of working.

Government at all levels took the onset of the crisis very seriously, and quickly improvised an intergovernmental architecture. A National Coronavirus Command Council (NCCC) was initiated through a cabinet decision on 15 March 2020, the same day a national state of disaster was declared, and 10 days after the first South African COVID-19 case (Rosenkranz et al., 2021). This apex structure was meant to cascade down to counterpart levels of disaster governance connecting the three spheres of government. What was established in Gauteng was, on the surface at least, determined by national regulations issued in terms of the Disaster Management Act, but the province's approach was also a reaction against weaknesses in disaster management capacity that became obvious when the crisis struck. As with Kerala's early establishment of a control room, the GDoH moved before the first COVID-19 cases arrived in South Africa to set up a coordinating structure within the department. However, it soon became clear that this did not have the convening power to drive a concerted government-wide response. When a state of disaster was declared in mid-March 2020, the province mobilized its provincial disaster

management centre. But here too the facilities and systems were soon deemed to be inadequate and so the province moved to establish fresh structures to deal with the crisis.

A Provincial Coronavirus Command Council (PCCC), chaired by then Gauteng Premier David Makhura, was established in April 2020 to mirror the NCCC. This structure was required by national regulations. Others, such as a coordinating body where the premier could meet twice weekly with municipal mayors, were local innovations. Most significantly, Gauteng configured a transversal Provincial Disaster Management Co-ordinating Centre (PDMCC) to bring varied functional areas of provincial government into horizontally cooperative groupings.

The PDMCC – which was quickly dubbed 'the war-room' after beginning to meet in April 2020 – was convened to overcome the familiar 'silo effect' of departments working to separate mandates. Taking the form of a daily online meeting, it became a cross-cutting, shared arena for reporting, decision-making and collective action, providing all players with a common view of developments. This 'whole of government' approach was enhanced by grouping separate departments into six programmatic work streams supported by a Programme Management Office.

The sense of urgency generated by the encroaching pandemic, and this new approach to governance, together signalled an interruption of 'business as usual'. However, they did not guarantee that the social practices of cooperative government would follow. There was still a vital need for strong leadership to signal common purpose and a collaborative ethic. At a political level the Gauteng Premier played a very visible role. He hosted regular media briefings, always including his top scientific and medical advisors, and worked closely on shared decisions and messaging with both national and local government leaders. The provincial director general demonstrated similar determined leadership. According to a senior official:

> The DG exercised immense leadership. She provided the vision for what was needed in this coordinated approach, she brought people together and told them what had to be done. … For quite a while there was a lot of frustration because people felt overwhelmed by the amount of work. … She put forward an argument … why the coordinated multi-sectoral, multi-level and inter-governmental approach was what was needed to fight this pandemic. (G-07 interview, 2 October 2020)

Previously stifled, inward-looking officials were thus incentivized to act quickly and collaboratively. As energy within the new structures began to build, it became clear that the success of cross-boundary collaboration depended heavily on the quality of relationships between differently placed officials. This relational competence was about officials being able to see beyond the boundaries of their own administrative domains, to how collaboration across adjacent fields of activity could be productive. One of our informants observed:

> The upside was that officials communicated among themselves and gained a maturity of understanding – people from different departments were discovering each other for the first time. I'm finding some really efficient individuals and developing personal and supportive relationships. (G-08 interview, 7 October 2020)

There were certainly challenges. It is easy to underestimate the intensely social processes involved in forming productive relationships in a new workplace functioning under pressure. As one official noted:

> There was a naïve perception that if everyone sits in one room, important things will happen. But as waves of people were called in, … much was unclear. Who does what, where? … We had to work it out for ourselves. (G-04 interview, 27 August 2020)

Yet under decisive leadership, and within the frame of new structures, many officials with 'associative dispositions' demonstrated agility by aligning their different capabilities into coordinated

responses. For instance, new bed capacity for COVID-19 patients was commissioned with gusto by the Premier's Office and Department of Infrastructure Development working together. The Premier's Office and the Department of Social Development together set up a food security hotline and mobilized an idle government fleet to distribute food parcels. Officials in the Premier's Office also worked with counterparts in the GDoH on configuring data systems and establishing a dashboard in the war room to project trends on COVID-19 spread. Although it took several months to forge necessary connections, agreement was subsequently reached with IBM-Research South Africa and university-based modellers to channel these data into a custom-built publicly accessible viewer.

4.3. Shifting capacities during crisis: a struggle to consolidate as old pathologies recur

While some domains of Gauteng's government showed agility and a willingness to adapt, other parts of the bureaucracy proved less fit-for-purpose, and were more inclined to resist responsiveness and change. Associative cross-functional relationships did not develop evenly, and the energized leadership encountered recalcitrance from many quarters.

A key factor was that in the prior context of eroded autonomy, and weak embeddedness, the cooperative ethic was experienced as deeply threatening. In many departments, especially the GDoH, legacies of previous public failures such as the Life Esidimeni tragedy remained unresolved, and staff exhibited defensive demeanours when expected to account for progress, work cooperatively or accept help. When their real weaknesses became apparent, they rebuffed efforts to encourage improvement as unwelcome 'interference'. As one official commented:

> When you open the door to other parties, you have people reflecting on your work and having oversight. With oversight, the gaps and loopholes become apparent. And that is where the resistance came from; people didn't want to allow others in to look at what they were doing. (G-07 interview, 2 October 2020)

So some crisis response initiatives moved very slowly, or not at all. As capability for data management and analytics became sharply relevant to inform adaptive responses, the cobbled-together system to track infections began to show weaknesses. Yet when modellers and analysts pointed out database errors or poor quality in the geopositioning of cases, or when external data-scientists tried to assist with information system improvements, they were met with a wall of denial and mistrust. A data analytics working group made up of clinicians, officials, modellers and analysts was convened in mid-2020. It circled unproductively around data quality and access issues for six months, with key gatekeepers refusing to attend meetings or resisting appeals for more transparency by referencing the confidentiality of patient information. Some participants eventually left the group in frustration, and it was disbanded in December 2020. Similarly, and in complete contrast to Kerala, a policy of building local level responsiveness through new ward structures was advanced in mid-2020. But with a dismal history of civil-society and community engagement, efforts to convene these 'ward-based war rooms' were largely stillborn.

The provincial leadership had to contend with other deep-seated pathologies within state structures, particularly how a well-developed machinery for patronage quickly took advantage of pandemic related emergency procurement. From as early as April 2020 the Gauteng Premier initiated investigations into corrupt procurement of personal protective equipment (PPE), a scandal that saw the removal of both the political and administrative heads of the GDoH. Then, in August 2021, a whistle-blower was assassinated. This subnational intrigue played out very publicly against the backdrop of related, larger national dramas which included the resignation of the country's Minister of Health over graft-related allegations in August 2021.

The public surfacing of government's lack of autonomy had a recursive impact on both administrative capability, and more importantly on embeddedness. Managing revelations of

corruption internally and externally undoubtedly distracted leadership from the urgent task of trying to respond adaptively to the pandemic, and as the crisis wore on there was a palpable waning of confidence and energy. More significantly, evidence began to mount that it had left a deep sense of betrayal of the public trust, further deepening the state–society rift and eroding infrastructural power.

4.4. Capacities beyond the crisis? Flagging vaccine rollout and signs of depleted trust

From early on Gauteng's energized leadership began to talk enthusiastically about how the pandemic provided an opportunity for a governance 'reset'. While recognizing that disaster-related modes of working could not be sustained indefinitely, they imagined that a version of the collaborative war room space could become a permanent feature. The Premier's Office – seeking to optimize the opportunities for learning from the crisis – commissioned an intensive 'deep-dive case study' on Gauteng's governance of the pandemic hoping to inform ongoing reform, and eagerly shared its findings with provincial and national audiences. Importantly, in November 2021, noting that 'unsatisfactory progress towards achieving commitments is largely due to fragmented efforts and lack of a sense of urgency and emergency that [was] demonstrated in tackling the pandemic', Gauteng resolved to replicate its COVID-19 war-room model to address other government priorities. Six war-rooms incorporating both officials and external stakeholders were established, amongst them ones focused on 'urban poverty and hunger', 'jobs and economy' and 'crime and lawlessness'.

However, it remains uncertain whether these intentions have indeed accreted into enduring transformation. As successive pandemic waves rose and fell the COVID-19 war-room structures began to meet less often, and officials started talking about getting back to the real business of government. Major upgrades of hospital facilities to anticipate subsequent infection waves were abandoned amidst reports of corruption (MedicalBrief, 2022), and a key hospital, Charlotte Maxeke, shut because of a fire in April 2021, remained only partially open a year later with fumbling infrastructure repairs and intergovernmental squabbling. Information management capacity failed to consolidate. When key data sources faltered in June 2021 during the third Delta wave, the whole information system, including the innovative public access IBM viewer, was discarded. So, when the fourth Omicron wave arrived in November 2021, the province was arguably flying blind, without the requisite data to support modelling or geographically targeted responses.

Gauteng's vaccination programme, rolled out in the second half of 2021, provides valuable insights. South Africa was relatively late in securing adequate vaccine supplies, but the delay was largely overcome by May 2021. Rather than supply constraints, success rested on the capability of the administration, and the receptiveness of the population. The vaccine rollout strategy was put into the hands of GDoH personnel who appeared reluctant to draw on previous experience in mounting large-scale HIV/AIDS and TB programmes whose success had rested on multi-partner and civil society collaboration, and powerful public communication strategies. Unlike in Kerala, the GDoH was also reluctant to recruit the cooperation of private sector health providers, or other social partners, who could have assisted with infrastructure and logistics. However, the much larger constraint was vaccine hesitancy by a sceptical population. Here, weakened public trust played a significant role. Evidence suggests that high vaccine hesitancy correlates strongly with low levels of trust in government (Alexander et al., 2021). A Gauteng-focused large sample survey, with interviews conducted between October 2020 and May 2021, revealed a 15 percentage point drop in residents' satisfaction with the provincial government compared with the previous survey wave in 2017/18. Only a quarter said they trusted current government leaders, and lack of trust was strongly correlated with concerns over corruption (Mushongera et al., 2021).

In July 2021, South Africa saw an extraordinary week of public violence and looting in which over 350 people died. While the trigger for violence was the impending imprisonment of former President Jacob Zuma, the extent of the turmoil seemed indicative of deep disaffection with the government's ability to take care of people over the pandemic. Lastly, in November 2021, in contrast to Kerala's recent election outcome, municipal elections saw a massive drop in turnout (in Gauteng from 58% of registered voters in 2016, to just 43%) – with all the major political parties losing votes (Mkhize et al., 2021).

This deteriorating public mood – a deepening crisis of state–society disengagement – affected vaccine take-up. Compounded by a delayed and tepid communication strategy, a toxic torrent of misinformation gained an uncontested presence on social media. By the time the fourth wave struck in December 2021, in contrast to Kerala's 95% vaccination rate, only 36% of Gauteng's population 12 years or older had received a vaccine dose (Madhi et al., 2022).

5. SYNTHESIS AND CONCLUSIONS

This study demonstrates the importance of comparative analysis of subnational governments in studies of governance and territory. Subnational states in federal or quasi-federal democracies enjoy considerable political agency on matters related to healthcare or disaster management, and their governance characteristics thus often have a significant impact in shaping policy and operational outcomes. These characteristics may be obfuscated in cross-country studies focused on the national level.

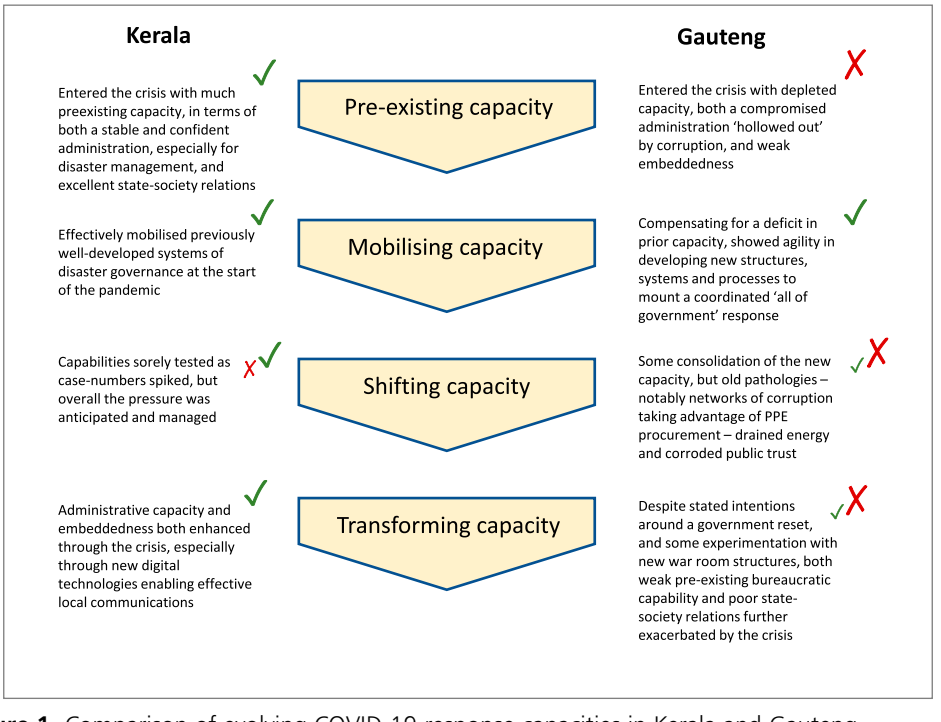


Figure 1. Comparison of evolving COVID-19 response capacities in Kerala and Gauteng.
Note: Summary diagram comparing Kerala and Gauteng over four stages of evolving COVID-19 response capacity: (1) pre-existing capacity; (2) initial mobilization of crisis-response capacity; (3) capacity shifts during the crisis; and (4) longer term transformation of capacity.

We show how subnational governance characteristics that frame crisis response capacity is highly specific to each territory. Long histories sediment diverse institutional configurations, political cultures and governance practices in each territorial context. Speaking back to ideas of path dependency and rupture in historical institutionalism, our study reveals how these territorially specific histories shape the potential for change in governance arrangements and capacities through a drawn-out disaster.

In this analysis we draw on Evans' notion of embedded autonomy to understand capacity as a combination of (1) the ability of administrations to act coherently, unencumbered by narrow political interests that might curtail effective action; and (2) ties that productively bind government and society, providing sources of intelligence, and the means of influence and resourcing. Our contention is that the capacity to manage COVID-19 in state/provincial governments at the coalface of the pandemic depends on both dimensions, which we read through more contemporary scholarship on state capacity and its deployment in response to disasters. As Figure 1 shows, taking a temporal perspective, we have compared the evolution of capacities in Kerala and Gauteng in terms of both facets over the first two years of the pandemic.

In summary, Kerala went into the crisis with a high degree of pre-existing administrative capacity, and more importantly an unparalleled degree of embeddedness through sedimentation of the unique Kerala model. Gauteng was not so advantaged, and entered the crisis with a bureaucracy hollowed out by corruption and depleted of assured and capable officials, as well as corroded state–society relations. The question is how, *exactly*, this prior capacity shaped what Kerala and Gauteng were each able to do over the crisis. In our temporal analysis we find that Kerala responded effectively to the crisis by quickly mobilizing its historically strong administration and infrastructural power. However, the expected linear relationship between prior capacity and responsiveness did not apply in Gauteng. Here, it was precisely by confronting its obvious administrative deficits that a determined leadership was able to move rapidly to assemble the means to coordinate action.

This does not mean that prior capacity has no bearing on the ability of governments to withstand a crisis. A crisis may occasion new capacity, but does this consolidate, or does it wither quickly as the crisis continues to batter state institutions? In Kerala, disaster management capacity was sorely tested post the initial response period, especially as caseloads spiked under the Delta variant in 2021. However, the pressure was anticipated, and the system innovated still further to cope. In Gauteng, old pathologies began to drain the new energy in the system. Officials, fearful of the greater exposure inherent in external collaboration, resisted new accountabilities; entrenched networks of corruption took advantage of fresh opportunities for graft in pandemic response resourcing; and efforts to build local level response structures were largely ineffectual. Over the longer run, the crisis has seen Kerala strengthen both dimensions of capacity, with new digital technology in particular enhancing disaster governance and infrastructural power through dynamic local communications. Kerala's unusual 2021 election result testifies to enhanced public trust. In Gauteng there were stated intentions to take advantage of the crisis to reset government, but over the course of the pandemic, the pre–existing weak autonomy and embeddedness have been further eroded. Public trust has faltered, further depleting infrastructural power desperately needed to overcome vaccine hesitancy.

Our case study comparison confirms the utility of Evans' (1995) conceptual schema and validates many of the insights emerging through the scholarly response to the COVID–19 pandemic, but it also speaks back to the literature by providing a territorially specific contextual and temporal framing that unsettles simple linear assumptions about how pre–existing capacity enables or constrains crisis responsiveness, Our analysis shows that both pre–existing and fresh capability need to be understood within a field of fluid contingencies that characterize the changing trajectory of a crisis and the responses of the actors within it. A crisis such as the COVID-19 pandemic is not a moment, a universal constant; it is rather a contextually contingent arc that

differs across place. Accordingly, both the nature of the crisis, and the necessary (or unfortunate) governance responses to the crisis, will evolve, and will do so in a dynamic mutually constitutive way differently in different territories. Our comparative case study allows us to understand that the prior capacity given by historical contexts may be less relevant for the period of initial crisis response mobilization – crises may foster new techniques and tools of government – and *more significant* for whether or not this new capacity is able to consolidate and endure. Our analysis suggests that pre-existing strong capacity weathers crisis over time, and in turn is further enhanced; but prior capacity deficits return to plague newly installed capacity, inhibiting its consolidation and leading to the further erosion of strength. Important here is understanding the territorially and historically specific contingencies in how old and new capacities dynamically interact at different points in time over a lengthy crisis. This deeper understanding will be useful as the world shifts from managing a crisis to recovery and seeks to leverage pandemic response capabilities for longer term benefits.

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